Title (en)

Semiconductor integrated capacitive acceleration sensor and relative fabrication method

Title (de)

Integrierter kapazitiver Halbleiter-Beschleunigungsmessaufnehmer sowie Verfahren zu seiner Herstellung

Title (fr)

Capteur d'accélération capacitif à semi-conducteur intégré et procédé pour sa fabrication

Publication

EP 0822415 B1 20030326 (EN)

Application

EP 96830438 A 19960731

Priority

EP 96830438 A 19960731

Abstract (en)

[origin: EP0822415A1] The acceleration sensor is formed in a monocrystalline silicon wafer (4) forming part of a dedicated SOI substrate (50) presenting a first (1) and second (4) monocrystalline silicon wafer separated by an insulating layer (2) having an air gap (3). A well (15) is formed in the second wafer (4), over the air gap (3), and is subsequently trenched up to the air gap to release the monocrystalline silicon mass (23) forming the movable mass (24) of the sensor; the movable mass (24) has two numbers of movable electrodes (28a, 28b) facing respective pluralities of fixed electrodes (29a, 29b). In the idle condition, each movable electrode (28) is separated by different distances from the two fixed electrodes (29) facing the movable electrode. <IMAGE>

IPC 1-7

G01P 15/00; G01P 15/08; G01P 15/125

IPC 8 full level

G01P 15/02 (2006.01); **B81B 3/00** (2006.01); **B81C 1/00** (2006.01); **G01P 15/08** (2006.01); **G01P 15/125** (2006.01); **H01L 29/84** (2006.01)

CPC (source: EP US)

G01P 15/0802 (2013.01 - EP US); **G01P 15/125** (2013.01 - EP US); G01P 2015/0814 (2013.01 - EP US)

Cited by

EP2428487A1; EP1160574A1; US6473290B2; US7882741B2; US8236694B2

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 0822415 A1 19980204; **EP 0822415 B1 20030326**; CN 1126173 C 20031029; CN 1180934 A 19980506; DE 69626972 D1 20030430; DE 69626972 T2 20040108; JP H10142254 A 19980529; US 6104073 A 20000815; US 6232140 B1 20010515

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EP 96830438 A 19960731; CN 97116107 A 19970731; DE 69626972 T 19960731; JP 20508897 A 19970730; US 45840099 A 19991210; US 90351197 A 19970730